

## Title (en)

High density plasma deposition and etching apparatus.

## Title (de)

Plasmapositions- und Ätzungsanlage mit hoher Dichte.

## Title (fr)

Dispositif de déposition et gravure à plasma à haute densité.

## Publication

**EP 0403418 A2 19901219 (EN)**

## Application

**EP 90610041 A 19900612**

## Priority

US 36553389 A 19890613

## Abstract (en)

The high density RF plasma generator of this invention uses special antenna configurations (15) to launch RF waves at low frequency such as 13.56 MHz along a magnetic field supplied by an external magnetic field generator (16.17) in a discharge space (14) where the working gas is introduced and which is used alone or in conjunction with a process chamber (18) where specimen substrates (20) are located to either deposit or etch films from a substrate or to sputter deposit films to a substrate. The plasma etching, deposition and/or sputtering system comprises the high density RF plasma generator, the external magnetic field, the gas injection and control system, the antenna system (15) and associated power supplies (48), the process chamber (18), and the means to couple plasma from the generator to substrates or targets, including magnetic means (36) to enhance plasma uniformity at the substrates (20) or targets (92). <IMAGE>

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## IPC 8 full level

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